X.—*On* Myospalax fuscicapillus, *Blyth*.—*By* W. T. Blanford, F. R. S., &c.

[Received May 8th;—Read June 1st, 1881.]

(With Plate II, in part.)

Forty years ago, some specimens of a rodent in the Society's collection were named by Mr. Blyth *Georychus fuscocapillus*. It was not known at the time whence they were procured, but Mr. Blyth supposed that they came from the Himalayas. The first mention of the name was in 1841,* in a list of specimens of skulls, and in the following year, a very brief and imperfect description of the animal was given.

No fuller account of the species was ever published. The true locality, Quetta, appears to have been ascertained by the late Captain Hutton, the animal was noticed and a short description of its habits given in his "Rough notes on the Zoology of Candahar" (J. A. S. B., XV, p. 141.) It was in this paper that the new generic name *Myospalax* appears to have been proposed for the first time: in a footnote, Mr. Blyth states that "this type differs from *Myodes* or the Lemming genus in the much greater size and strength of the feet, in the elongation and protrusion of its upper incisive tusks, &c., and he adds that he will describe the form more particularly, together with some other new rodents. That such was his intention is apparent also from a letter to the Honorary Secretary published in the preceding volume of the Society's Journal,† in which Mr. Blyth requests that a figure of the animal and its skull might be prepared for publication. The request was granted, but apparently the plate was never drawn, it was certainly, so far as I am aware, never published. In Mr. Blyth's Catalogue of the Mammalia, the specimens in the Society's collection are recorded with references to all the accounts above noticed.‡ So far as I am aware the animal has never been mentioned in European works,§ probably because the first brief notice escaped record in Wiegmann's Archiv.

Recently, when occupied in determining the *Arvicolæ* of the Himalayas, my attention was called to a specimen, brought by Mr. Griffith from Afghanistan, that had long been in the old East India Company's Museum

* For references see synonymy.

† J. A. S. B., XIV, Proc. Oct. 1845, p. ciii.

‡ There is also a brief allusion to this species by Mr. Blyth in 1863, J. A. S. B., XXXII, p. 89.

§ The same name *Myospalax* was subsequently used by Brandt, (Mem. Acad. St. Petersburg 1855, IX, and by Carus and Gerstaecker, (Handbuch der Zoologie, 1875, p. 108,) for the genus *Siphneus*, the type of which was named *Mus myospalax* by Laxmann in 1773. See A. Milne-Edwards, Rech. Mamm. pp. 71, &c.

and had finally been transferred to the British Museum. This proved to be a true *Arvicola* (see previous paper) but in external characters it had some resemblance to *Myospalax fuscicapillus*, of which I had a distinct recollection. On my application, Dr. Anderson, Superintendent of the Indian Museum, was good enough to obtain the permission of the Trustees to send one of the specimens of Blyth's species and a skull to London for me to examine. After comparing this with, Mr. Thomas's assistance, I am unable to find that the animal has ever been described elsewhere, and the most nearly allied known form appears to be the Russian *Ellobius talpinus*. I cannot find any good generic character to distinguish *Myospalax* from *Ellobius*, although the difference between the two is considerable, and may induce some naturalists to separate them generically. For the present, I think the Quetta species may be called *Ellobius fuscicapillus* the following is a description of the skin and skull, which, with the teeth, is figured on Pl. II.

Ellobius fuscicapillus.

Georychus fuscocapillus, Blyth, J. A. S. B., 1841, X, p. 928; 1842, XI, p. 887.

Myospalax fuscocapillus, Blyth, J. A. S. B., 1846, XV, p. 141; Cat Mam. Mus. As. Soc. p. 126.

Colour on the upper parts buff, (very pale fulvous or light brownish yellow;) except on the upper surface of the head, which is hair brown. Lower parts rather paler, tail nearly the same colour as the back, feet pale.

Fur soft, light ashy grey at the base, and for rather more than half the length, terminal portion on the back dirty light brownish yellow, no longer hairs on the back, a few towards the rump, and around the base of the tail; these have not dark tips. On the head the hairs are brown throughout, in the middle of the belly yellowish white. The hair on the specimen examined is short, being only $\frac{3}{10}$ inch long, in the middle of the back.

Ear-conch rudimentary.

Whiskers buff, the uppermost brown, none in the skin examined extends back beyond the ears.

Feet of moderate size, rather broad, toes long, claws blunt, short, formed for digging, horn-coloured, overhung by long hairs. In the forefoot the second is but little shorter than the third but considerably longer than the fourth, exceeding it by about the same amount as that by which the fourth itself extends beyond the fifth; thumb very short, but with a claw nearly equal to that of the other toes. Pads beneath each fore foot 5 in number, the two anterior at the base of the three middle toes, of these the

outer appears to be double, (it is difficult to be certain of the characters in a dried specimen;) the third is inside the base of the 5th toe, the two posterior tubercles are considerably larger than the rest and the inner is rather more distal than the outer. On the hind foot the second toe is nearly as long as the third and considerably longer than the fourth, exceeding it by nearly the same amount as the fourth itself extends beyond the first, which again is but little longer than the fifth. There are 6 distinct pads or tubercles beneath the hind foot, arranged in 3 pairs as usual, the inner pad of the second pair, at the base of the first toe, appears to be double, those forming the proximal pair are nearly opposite to each other and are rather nearer to the anterior pair than to the heel. The whole planta to the heel is naked, though there are long hairs on the sides of the feet.

Tail very short, thinly clad with long light yellowish brown hair, that extends $\frac{4}{10}$ inch beyond the end.

The following are the dimensions *of the dried skin*.

	inches.
Length nose to rump	5.
„ tail, without hair at end	0·35
„ forefoot without claws	0·67
„ middle toe ditto	0·28
„ hindfoot from heel ditto	0·85
„ middle toe ditto	0·25

The *skull* is that of an aged individual the occipital crest is very strongly developed and the sutures too fully anchylosed for the shape of the interparietal to be distinguished. The cranium is not quite perfect, the parts around the *foramen magnum*, including the auditory bullæ, having been cut away. Compared with the skulls of *Arvicola*, the most striking differences are the greater thickness of all the bones, the much greater development of the occipital crest, of the zygomatic arch, and of the bones of the anterior or facial portion generally, as compared to the brain case. The measurements are:—

	inch.	met.
Length from middle of occipital plane to end of nasals	1·34	·0345
„ from paroccipital process to front of incisors	1·62	·041
„ of suture between nasals	0·47	·012
Breadth across hinder part of zygomatic arches	1·1	·028
„ across brain pan behind zygomatic process of squamosal	0·6	·015
„ across frontals where narrowest between orbits	0·23	·006
Length of row of upper molars (crowns only)	0·32	·008
Distance from anterior end of upper molar to base of incisors	0·55	·014
Length of anterior palatine foramina	0·14	·0035

Length from base of incisors to posterior termination of palate	0·9	·023
Breadth of bony palate between front lobes of anterior molars	0·13	·0035
Length of lower jaw from angle to symphysis	1·12	·028
Height of ditto to end of coronoid process	0·6	·015
Length of row of lower molars	0·32	·008

The occipital plane slopes backwards. The upper surface of the skull is rounded and slopes away more rapidly at the sides than in *Ellobius talpinus* or in *Arvicola*, the sagittal crest is strong posteriorly, but sinks down in front. The nasals are nearly of the shape of a wine bottle with concave sides, the posterior termination is not pointed but truncated by the irregular zigzag suture, the outer margins are straight and nearly parallel for a short distance from the posterior end, then convex, and again in front slightly concave. The premaxillæ extend further back than usual on the upper surface of the skull, and terminate posteriorly in points some distance behind both the end of the nasals and the origin of the zygomatic process of the maxilla. The zygomatic arch is very high in the middle and presents the peculiarity of the maxillar and squamosal processes meeting along the lower edge and forming a suture; the malar, a high but short bone, does not extend to the lower margin, nearly two-thirds of the length of which is composed of the maxillar process. The infraorbital foramen is large, triangular when received from the front, not produced in the form of a narrow slit below, and about one and a half times as high as broad.

The anterior palatine foramina are very small and narrow, the posterior palatine foramina are numerous, relatively large, and situated in two deep grooves, occupying the greater part of the palate posteriorly. The opening of posterior nares is very narrow, much narrower than each of the broad pterygoid fossæ.

Teeth. The incisors are long and project forward considerably in both jaws, those in the upper jaw are of moderate breadth and flat in front; lower incisors narrower, and rounded in front. They are nearly white in both jaws.

The row of upper molars is very slightly curved; all the teeth are of nearly equal breadth. The first upper molar has 3 external and 3 internal angles, the internal (those to the right in the figure) being rather anterior to the external. The slope from the hinder angle on each side to the posterior extremity of the tooth is concave, especially on the external side. The second tooth has 3 subequal angles outside and terminates posteriorly in a rudimentary angle in contact with the hinder molars; on the inside there are 3 angles first a small angle, then a larger one, there being no distinct re-entering angle between the two, the re-entering angles between the second and third inner angles, and between the last and the first of the hinder tooth are square, not pointed. The third tooth has 3 outer and 2

inner angles, the outer are nearly equi distant, but there is no re-entering angle between the first and second, though there is between the second and third, the posterior termination of the tooth is a very slightly projecting rounded lobe, and it may be noted that each of the upper molars terminates in a somewhat similar lobe, as in *Arvicola*.

In the first lower molar there are 4 outer and 5 inner angles, the first on each side rounded and less prominent than the others, the two hinder pairs on opposite sides of the tooth nearly opposite to each other; the anterior extremity is a rounded lobe, nearly as broad as long, with a very blunt rounded angle inside, in advance of a still blunter one outside. The second and third lower molars have each 3 angles on each side, all nearly opposite to each other, the outer (those to the right in the figure) being in each case a little in advance of the inner. In the second molar the angles inside and outside are nearly equal to each other, in the posterior molar the inner angles are stronger than the outer, and the first outer angle is less prominent than the other two.

The lower jaw is strong, the coronoid process well developed, the tubercular projection corresponding to the posterior extremity of the lower incisor situated just outside and a little below the condyle, so as to make the latter appear almost double.

Compared with *Ellobius talpinus*, the differences presented by the form here described are numerous, but the external distinctions are less striking than those shewn by the skull. *E. fuscicapillus* is larger, yellower, and rather paler-coloured, and the tail appears a little longer. The base of the fur is much paler, that of *E. talpinus* being almost black, that of *E. fuscicapillus* light grey. There are some slight differences too in the feet, *e. g.*, the second toe of the fore foot in *E. talpinus* appears to be much shorter in proportion to the middle toe than in *E. fuscicapillus*. The feet too appear larger in the latter but it must be remembered that the comparison is made between dried skins.

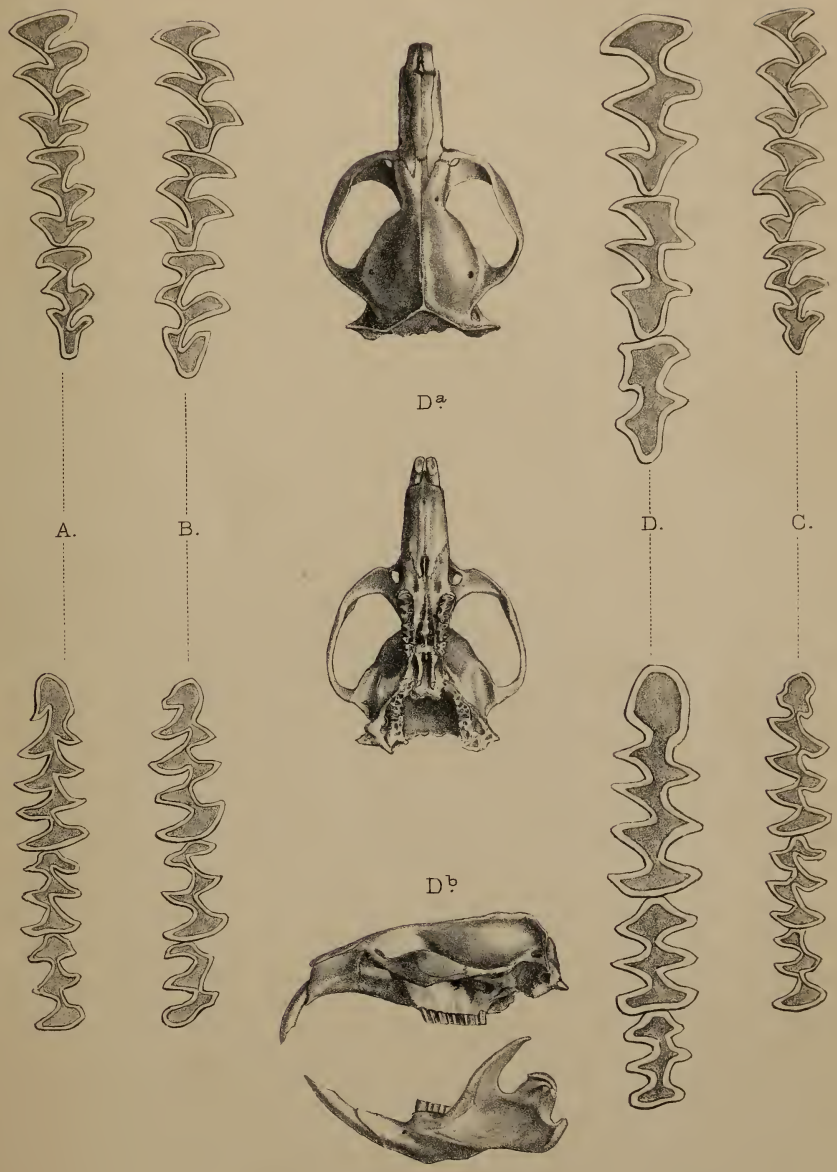
The hinder upper molar in *E. talpinus* is proportionately much shorter, the two anterior outer angles are close together, and the posterior lobe behind the hindmost outer angle is wanting. The second inner angle too is ill developed or obsolete. In the first tooth of the lower jaw there are only 3 distinct external and 4 internal angles, instead of 4 and 5, and the anterior lobe is very slightly developed.

The skulls of *E. talpinus* in the British Museum (two in number) differ greatly in form from that of *E. fuscicapillus* and are much more Arvicoline, the facial bones being far less developed in proportion to the brain case, and the occipital crest very small. The zygomatic arch is less high but similar in form and in the arrangement of the bones, the maxillar process, however, is not quite in contact with that of the squamosal

although the two approach each other very closely. The nasals have not the peculiar form that they have in *E. fuscicapillus*, but are simply arcuate or convex externally, and the præmaxillæ terminate posteriorly opposite the end of the nasals and the origin of the zygomatic arch. The anterior palatine foramina, though small are not quite so minute as in the Quetta species, and the posterior portion of the palate is less deeply grooved. The posterior nares and pterygoid fossæ are similarly shaped. In the lower jaw the coronoid process is shorter, and the angle is differently shaped, but the peculiar condyle is precisely similar, the tubercle at the root of the incisor being just outside and below in both species.

It is evident that if, as I believe, *E. fuscicapillus* belongs to the genus *Ellobius*, the short description of that genus by Alston in his classification of the order *Glires** will need some modification, since the skull in the species now described is not very like that of *Arvicola* and the facial portion is more developed instead of less.

* P. Z. S., 1876, p. 85.



Edwin Wilson del et lith.

Mintern Bros. imp.

A. Arvicola melanogaster.
B. A. blythi.
C. A. mandarinus.
D. Ellobius fuscicapillus.